APPENDIX D

Fire Regime Condition Class

The following description of Fire Regime Condition Class is directly taken from the Northern Regional Division of the National Fir Plan Cohesive Strategy Team.

"Historical timber harvest, livestock grazing, and fire suppression have dramatically changed vegetation conditions throughout the Northern Rockies. Species composition, spatial patterns, fuels, likely fire behavior, and subsequent fire effects have changed due to fire exclusion and vegetation manipulation. Fire-regime condition class (FRCC) is an approximation of ecosystem departure resulting from a change in fire regimes. FRCC serves as a proxy to ecological fire effects. That is, the greater the departure, the greater the probability that the status of some ecosystem component will decline if a fire occurs. Severe fire effects are those that are considered to be outside those effects characteristic of the historical range of variability. We used three condition classes to qualitatively rank the departure from the historical fire-regimes. To a large extent, fire-regime condition classes were derived from a comparison of the historical fire regime and the current fire severity. To derive condition class, we simply assessed the transition between our projected current fire severity and the historical fire regime of a given site. If the evidence suggested that fire severity had changed by at least one class, then we would conclude that the condition class has a value that exceeds Class 1. In other words, we would infer that the fire effects would be something other than the effects expected if the structure and composition reflected the historical range of conditions. The greater the departure, the greater the probability that key components would be lost if a wildfire occurred. We made many assumptions prior to developing the modeling rules to derive fire regime condition class: 1) The current fire severity, and consequently the condition class could only increase as a result of fire exclusion. 2) Condition Class 1 occurred if there had been no detectable change in fire severity between the historical fire regime and the current fire severity. 3) Although fire exclusion has likely resulted in an increase of the duff depth, and consequently future fires will probably be more severe, the resolution of our base data did not allow us to make inferences concerning duff depths. 4) Fire exclusion has not measurably changed fire severity of the communities within the MS3, SR1, and SR2 fire regimes…..

These data were designed to characterize broad scale patterns of fire-regime departures for use in regional and sub-regional assessments. The departure of the current condition from the historical base line serves as a proxy to the potential of severe fire effects. In applying the condition class concept, we assume that historical fire regimes represent the conditions under which the ecosystem components within fire-adapted ecosystems evolved and have been maintained over time. Thus, if we projected that fire intervals and/or fire severity has changed from the historical conditions, we would expect that fire size, intensity, and burn patterns would also be subsequently altered if a fire occurred. Furthermore, we assumed that if these basic fire characteristics have changed, then it is likely that there would be subsequent effects to those ecosystem components that had adapted to the historical fire regimes. As used here, fire-regime condition classes reflect the probability that key ecosystem components may be lost should a fire occur." (Source: Cohesive Strategy Team)